

Serial No. 10/029,981

NIP-144-02

REMARKS

The Applicant requests reconsideration of the rejection.

Claims 10-14 and 21-27 are pending.

The Applicants request acknowledgement of the claim for priority in this case. The certified priority document (JP 10-070201, filed March 19, 1998) was filed in the parent case, U.S. Serial No. 09/268,637.

In view of the cancellation of claims 15-20, the outstanding rejections of claims 15-20 under 35 U.S.C. §112 and §102(b) and §103(a) are moot. The Applicants make no admission as to the propriety of these rejections.

Claims 10-15 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Petschek et al U.S. Patent No. 5,389,339 (Petschek) in view of Kopaciewicz U.S. Patent No. 6,048,457 (Kopaciewicz).

Petschek is applied as disclosing a computer-controlled automated system for the purification of DNA from biological samples. The Examiner particularly cites Petschek's "movable piston" which varies the volume of an air cylinder operably connected to a pipette arm pipetting and in column 2, lines 61-65. The Examiner also refers to Figure 2A of Petschek, disclosing a movable nozzle connected via a pipe to the movable piston, and Figure 1B which discloses the movable

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nozzle and a holder 58, together with elongated pipette tips 80, 81.

The Examiner notes, however, that Petschek does not disclose a silica-containing pipette tip as required by the claims, but cites Kopaciewicz for this teaching.

The Applicants have amended independent claim 10 to more particularly point out and distinctly claim the means for supplying an eluting solution, and the liquid sucking-and-discharging operating means of the invention. An important feature of the invention is the use of the eluting solution in two parts, namely the "first eluting solution" and the "second eluting solution".

In the prior art, an eluting solution has been known to elute the nucleic acid from its binding to a solid phase substance. However, in the prior art, the eluting process is performed only once with a quantity of the eluting solution.

As now claimed, the eluting process is performed with first and second eluting solutions. By performing the eluting process with first and second eluting solutions, a higher percentage of recovered nucleic acid results, by comparison with an equal quantity of eluting solution applied singly in the prior art.

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For example, when a single eluting step is performed with 200 μL of eluting solution, only 0.90 μg of the nucleic acid is withdrawn. On the other hand, 200 μL of eluting solution divided into two eluting procedures results in withdrawal of 0.96 μg of the nucleic acid.

Thus, it is not an anticipation of the invention to find an eluting process in the prior art, and there is no question of obviousness to divide the elution into plural steps because, as demonstrated above, the plural steps provide an unexpected result: namely, that a greater withdrawal of nucleic acid is achieved with plural eluting steps, even given an identical volume of eluting solution.

The newly-added language in the final two paragraphs of independent claim 10 particularly recite this feature in terms of the function of the claimed liquid sucking-and-discharging operating means. Further, the purified product contained is recited with the function of receiving the purified product of the nucleic acid by the discharging of the first and second eluting solutions from the nucleic acid trapping pipette tip.


New claims 21-27 provide additional scope of protection. Each claim is dependent from claim 10.

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In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

Respectfully submitted,


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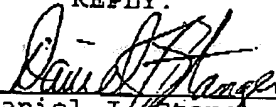
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